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BOARD OF PATENT APPEALS
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FACSIMILE TRANSMITTAL SHEET

DATE: July 18, 2005

TO: Pamela BennettCOMPANY: USPTOFAX NO.: 571-273-0299 (TEL. NO.: 571-272-4579)FROM: Leah M. Reimer/Laura J NolanOUR REF.: U.S. Appln No. 09/916,116 YOUR REF.: _____

TOTAL NUMBER OF PAGES SENT 11 INCLUDING COVER SHEET

COMMENTS:

Dear Ms. Bennett:

Applicants appreciate the telephonic notification of July 11, 2005 regarding the need for a section XI and XII in the Appeal Brief filed in the above-referenced case. Pursuant to that communication, please find herewith additional page 20 to be included with the Appeal, together with copies of the evidence relied upon.

Sincerely,
Laura J. Nolan for
Leah M. Reimer

If there are any problems with this transmission, please call Laura at (860) 286-2929.

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XI. EVIDENCE APPENDIX

Evidence relied upon by the Appellant in this appeal includes two Declarations of Brett Kilhenny submitted pursuant to 37 C.F.R. §132, copies of which are attached hereto.

1. The Declaration of Brett Kilhenny pursuant to 37 C.F.R. §132 dated July 3, 2003, may be found in the record with the Amendment After Final filed July 7, 2003.
2. The Second Declaration of Brett Kilhenny pursuant to 37 C.F.R. §132, dated May 25, 2004, may be found in the record with the Amendment filed May 25, 2004.

XII. RELATED PROCEEDING APPENDIX

There are no other related appeals or interferences, nor any decisions rendered by a court or the Board in any related proceeding, known to Appellants, Appellants' legal representatives, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

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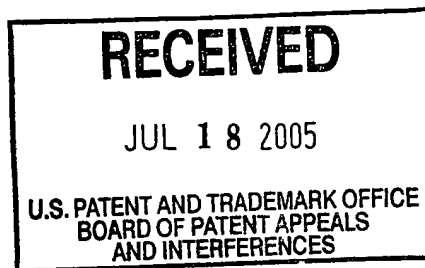
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Price et al)
Serial No.: 09/916,116) Group Art Unit: 1771
Filed: July 26, 2002)
For: COMPRESSIBLE FOAM TAPES AND) Examiner: V. Chang
METHOD OF MANUFACTURE)
THEREOF)

DECLARATION

I, Brett W. Kilhenny declare as follows:



1. I am a co-inventor of the above-referenced patent application.
2. I have read and understood the application and the Final Office Action dated March 4, 2003. I have further read and understood U.S. Patent No. 3,839,087 to Birchall et al.
3. Flexography tapes comprising, for example, polyethyleneterephthalate (PET) reinforcing films and polyurethane compressible layers can delaminate upon their removal from the printing cylinder/printing plate. Such delamination is highly disadvantageous, causing lost time and inefficiency in the printing process.

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4. A sample of a flexographic tape comprising such a PET reinforcing film and a polyurethane compressible layer is attached hereto as EXHIBIT 1. Visual examination of this and other delaminated samples indicated that delamination apparently occurred as a result of insufficient bond strength between the reinforcing film and the compressible layer. However, the data below are not consistent with this mechanism, and the inventors hercof have discovered that such delamination likely occurs due to weak cohesive strength at the surface of the PET film (Specification, page 2, lines 10-11).

5. Two scanning electron micrographs of the surfaces of the delaminate film were obtained and are attached hereto as EXHIBIT 2. Micrograph 1A shows the surface of a delaminated polyurethane layer (900 X), and Micrograph 1B shows the surface of a delaminated PET layer (900 X). Neither of the surfaces is smooth, and the "onion skin" skin appearance indicates that delamination occurred as a result of cohesive failure of the PET.

6. Results of Electron Spectroscopy for Chemical Analysis (ESCA) of the two surfaces are reproduced below:

Sample	Carbon Chemistries (relative %)			
	C-C, C-H	C-O	C=O	O-C=O
PET Control	74	13	--	13
PUR Control	56	36	2	6
Delaminated PUR Surface	67	20	--	14
Delaminated PET Surface	67	18	--	15

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As may be seen from the above data, the surface of the polyurethane layer exhibits signals indicative of the presence of polyester groups, and is, in fact, remarkably similar to the surface of the PET (which is a polyester).

7. The inventors hereof further washed the surface of the PET film, prior to casting of the polyurethane layer, with a variety of solvents, including alkanes such as hexane, ketones such as methyl ethyl ketone, and acetates such as ethyl acetate. Such washing would be expected to remove any contaminants from the surface of the PET film, as well as monomeric or oligomeric PET species that might cause the observed delamination. Such washing was found to be ineffective in preventing the observed delamination.

8. The above data indicate that insufficient bond strength between the polyurethane foam layer and the reinforcing film is probably not the source of delamination, but rather occurs because of a cohesive failure of the PET film. A sample of a foam tape comprising a PET reinforcing film, a low melt point copolyester heat seal anchoring layer and a polyurethane compressible layer in accordance with the present invention is attached hereto as EXHIBIT 3. Using the crosshatch and peel test described at page 18 of the instant Specification shows that the polyurethane foam tears before the foam and the reinforcing layer separate.

9. Use of an anchoring layer between the compressible polyurethane foam layer and the reinforcing layer thus provides unexpected results, in that anchoring layers are generally used to improve bond strength between two layers, but here apparently increases

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the cohesive strength of the reinforcing layer (See also Table 1 of the Specification). As pointed out by the Examiner in the Office Action, an increase in cohesive strength of the reinforcing layer itself is unlikely. However, and as discussed in the Office Interview, the inventors theorize that use of the anchoring layer protects the reinforcing layer from delamination.

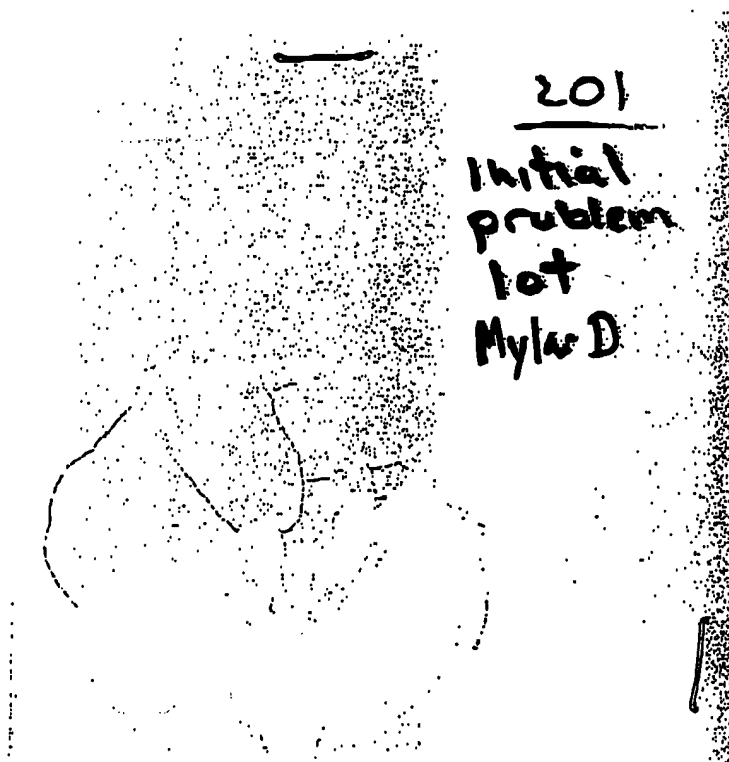
10. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or document or any patent resulting therefrom.

Date: July 3, 2003


Brett W. Kilhenny

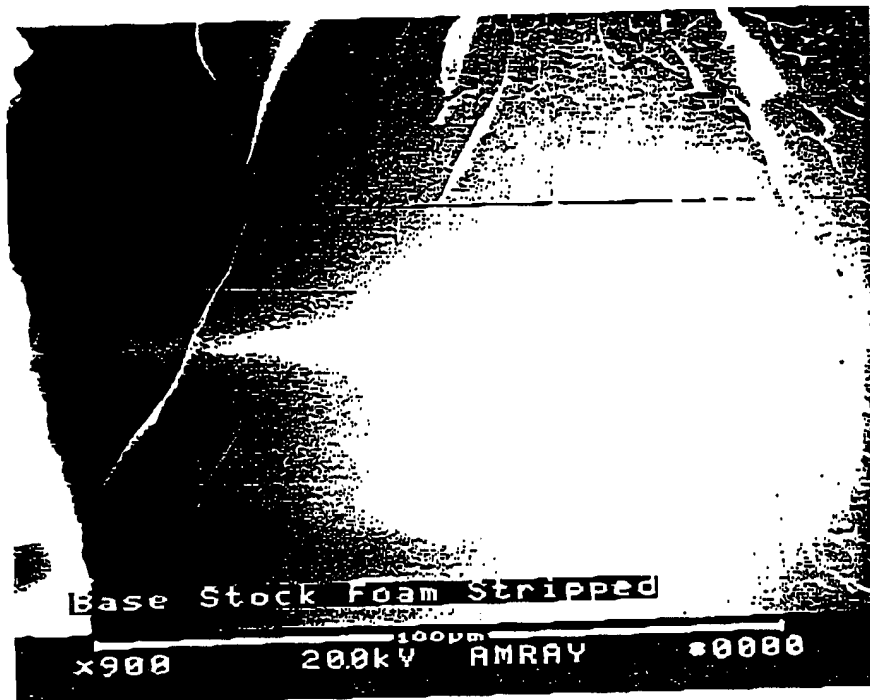
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EXHIBIT 1

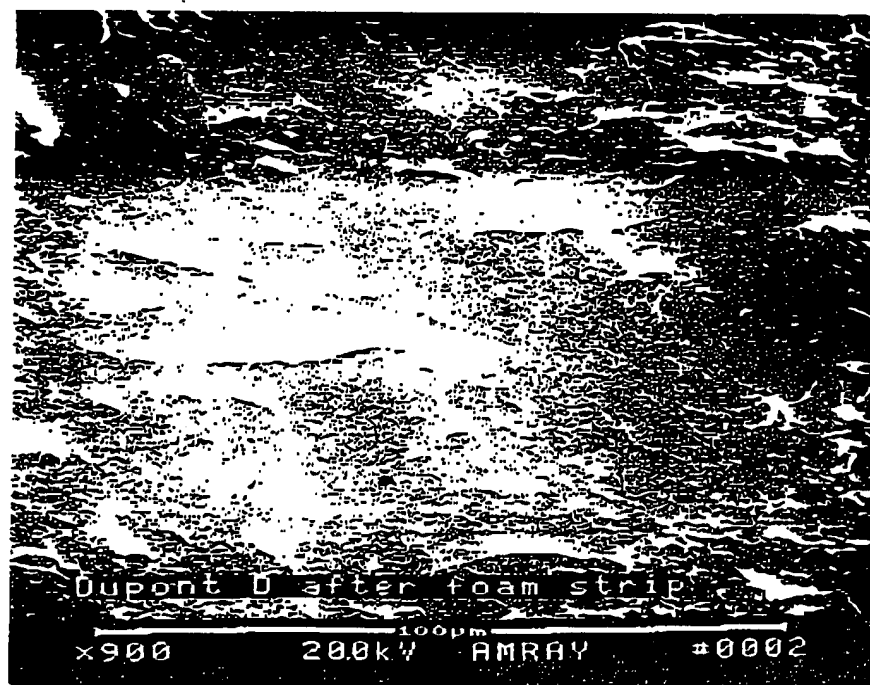


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EXHIBIT 2



1A



1B

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Price et al)
Serial No.: 09/916,116) Group Art Unit: 1771
Filed: July 25, 2002)
For: COMPRESSIBLE FOAM TAPES AND)
METHOD OF MANUFACTURE)
THEREOF)

SECOND DECLARATION
PURSUANT TO 37 C.F.R. § 1.132

By Facsimile: 703-872-9306

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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I, Brent W. Kilhenny declare as follows:

1. I am a co-inventor of the above-referenced patent application, the "116 application".

2. I have read and understood the 116 application and the Final Office Action dated November 25, 2003. I have further read and understood U.S. Patent No. 3,839,087 to Birchall et al.

3. Flexography tapes for flexographic printing generally comprise a reinforcing film (for example polyethyleneterephthalate (PET)) adhered to a foam. A first adhesive on one side of the foam is used to adhere the tape to the printing cylinder, and a second adhesive on one side of the reinforcing film is used to adhere the tape to the printing plate.

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4. The present invention is directed to flexography tapes comprising a polyurethane foam. It has been found that when a polyurethane foam is used, the tape is not cleanly removable from the printing cylinder and/or plate.

5. As described in my previous declaration, we have unexpectedly developed evidence that clean removal of the flexography tape is prevented by internal (cohesive) failure of the reinforcing layer, and not failure of the bond between the foam and the reinforcing layer. Evidence of cohesive failure of the reinforcing layer includes scanning electron micrographs and ESCA data of the surfaces of the polyurethane foam and the reinforcing layer. It was further found that washing the surface of the reinforcing layer prior to casting the foam, which would be expected to improve the bond strength between the foam and the reinforcing layer, failed to yield tapes that could be cleanly removed.

6. Another experiment was designed to test whether clean removal of the tape is due to cohesive failure of the reinforcing layer, rather than the strength of the bond between the foam and the reinforcing layer. In this experiment, a polyurethane foam as described in the '116 application was cast onto a 2 mil PET reinforcing layer. The foam was then crosshatched as described in the '116 application and peeled off of the reinforcing layer by hand. The foam peeled off with relative ease. The peeled surface of the foam was observed to have a characteristic "frosted" appearance on the side that was stripped from the PET, indicating the presence of a thin PET layer on the foam. Next, a second polyurethane foam was cast onto the same side of the same PET reinforcing layer. The crosshatch and peel test was repeated. Again, the foam peeled off with relative ease, and was observed to have a frosted appearance indicative of the presence of PET on the surface of the peeled foam.

8. It can therefore be concluded that the second foam was separated from the reinforcing layer as a result of cohesive failure of the reinforcing film, rather than a weak boundary layer at the surface of the PET film. If removal were the result of a weak boundary layer at the surface of the PET film, this layer would have been removed along with the first

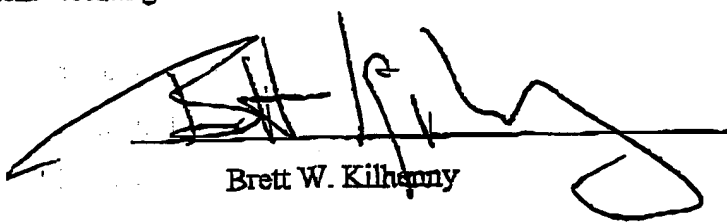
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foam layer, and no PET would have been observed on the surface of the second foam layer. The lack of adequate cohesive strength in the PET reinforcing layer does not, therefore, appear to be the result of inadequate surface cleaning or a weak boundary layer.

8. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or document or any patent resulting therefrom.

Date:

5/25/04
Brett W. Kilhepp